

REMARKS

This is intended as a full and complete response to the Office Action dated July 21, 2006, having a shortened statutory period for response set to expire on October 21, 2006. Please reconsider the claim pending in the application for the reasons discussed below.

Claim 3 remains pending in the application and is shown above. Claims 3 is rejected. Reconsideration of rejected claim 3 is requested for the reasons presented below.

Claim 3 is amended to clarify the invention. Support for amended claim 3 is found, for example, at paragraphs [0078], [0092], and Figure 9 of U.S. Pat. App. Pub. No. 2004/0016637. These amendments are not presented to distinguish a reference, thus, the claims as amended are entitled to a full range of equivalents if not previously amended to distinguish a reference.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Dordi *et al.* (U.S. 6,267,853 B1) in view of Pascal *et al.* (U.S. 6,415, 804 B1), and further in view of Sendai *et al.* (US 6,558, 518 B1). The Examiner states that Pascal *et al.* teaches a spin rinse dry cell used in semiconductor fabrication (col. 1, lines 5-8). The Examiner states that the spin rinse dry cell of Pascal *et al.* comprises a cell bowl having an upstanding cylindrical wall (Fig. 4, numeral 102b), an annular and inwardly curving pressure reducing surface positioned on a top portion of the upstanding cylindrical wall (Fig. 4, numeral 124b), a fluid receiving shield extending radially inward from an upper portion of the upstanding cylindrical wall (Fig. 4, numeral 126 or numeral 124a), a rotatable substrate support member centrally positioned in the cell bowl (Fig. 1, numeral 112, 110 and 114a-c) and a fluid dispensing nozzle configured to dispense a rinsing solution onto an upper surface of a substrate positioned on the support member (col. 8, lines 14-18). The Examiner concludes that it would have been obvious to one of ordinary skill in the art to have incorporated the spin rinse dry cell of Pascal *et al.* into the electrochemical plating apparatus of Dordi *et al.* in order to control the airflow around a wafer and minimize recontamination caused by recirculating particles and DI water droplets as taught by Pascal *et al.* (col. 9, lines 30-39).

The Examiner further states that since the instant claim only requires an inwardly curving pressure reducing surface that the bottom surface of the projection (Fig. 4, numeral 124b) in the spin rinse dry cell of Pascal *et al.* reads on the claimed inwardly curving pressure reducing surface. The Examiner further states that since neither the instant specification nor the instant claims supports or requires that the claimed fluid receiving shield being attached to the upper portion of the cylindrical wall, the examiner concludes that the annular flow guide (Fig. 4, numeral 126) as taught by Pascal *et al.* reads on the claimed fluid receiving shield being extended radially inward from the upper portion of the cylindrical wall of the spin rinse dry cell. The Examiner states that even if the annular flow guide of Pascal *et al.* were not to be read on the claimed fluid receiving shield, the projection of Pascal *et al.* (Fig. 4, numeral 124) still reads on the claimed fluid receiving shield extending radially inward from the upper portion of the cylindrical wall. Applicants respectfully traverse the rejection.

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. See MPEP §2142. To establish a *prima facie* case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP § 2143. The present rejection fails to establish at least the third criteria.

In this case, Dordi *et al.*, Pascal *et al.*, and Sendai *et al.*, either alone or in combination fail to teach, show or suggest an annular and inwardly curving pressure reducing surface positioned on a top portion of the upstanding cylindrical wall and a fluid receiving shield attached to, and extending radially inward from, an upper portion of the upstanding cylindrical wall, wherein the fluid receiving shield has a plurality of holes as recited in amended claim 3. Claim 3 has been amended to clarify that the fluid receiving shield is attached to an upper portion of the upstanding cell wall. Regarding the Examiner's assertion that the instant specification does not support the claimed fluid receiving shield being attached to the upper portion of the cylindrical wall, Applicants submit that support for this amendment is found, for example, at paragraphs [0078] and

Figure 9 of U.S. Pat. App. Pub. No. 2004/0016637. Pascal *et al.* teaches a distance X, between the outer edge of the annular flow guide 126 and the inner surface of the sidewall 102b corresponding to the width of annular exhaust opening 130. Col. 5, lines 55-57. As a result, the annular flow guide of Pascal *et al.* does not read on the claimed annular and inwardly curving pressure reducing surface and fluid receiving shield recited in amended claim 3.

Regarding the Examiner's assertion that even if the annular flow guide of Pascal *et al.* were not to be read on the claimed fluid receiving shield the projection of Pascal *et al.* reads on the claimed fluid receiving shield extending radially inward from the upper portion of the cylindrical wall, Applicants further note that Pascal *et al.* does not teach wherein the fluid receiving shield has a plurality of holes as recited in amended claim 3. The fluid receiving shield having a plurality of holes performs the function of collecting fluid spun off of the substrate and allowing it to flow downward through the plurality of holes in a controlled manner.

Therefore, Dordi *et al.*, Pascal *et al.*, and Sendai *et al.*, either alone or in combination, do not teach, show, or suggest a substrate loading station positioned in communication with a mainframe processing platform, at least one substrate plating cell positioned on the mainframe, at least one substrate bevel cleaning cell positioned on the mainframe, at least one spin rinse dry cell positioned on the mainframe in a substrate transfer path between the at least one substrate plating cell and the substrate loading station, wherein the at least one spin rinse dry cell comprises a cell bowl having an upstanding cylindrical wall, an annular and inwardly curving pressure reducing surface positioned on a top portion of the upstanding cylindrical wall, a fluid receiving shield attached to, and extending inward from an upper portion of the upstanding cylindrical wall, wherein the fluid receiving shield has a plurality of holes, a rotatable substrate support member centrally positioned in the cell bowl, and a fluid dispensing nozzle configured to dispense a rinsing solution onto an upper surface of a substrate positioned on the support member, and a stacked substrate annealing station having a substrate heating plate and a substrate cooling plate adjacently positioned therein, as recited in amended claim 3. Withdrawal of the rejection is respectfully requested.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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